Appendix C.
Changes: 2017 to 2019

The American Housing Survey (AHS) began in 1973 as the Annual Housing Survey. Since 1981, the U.S. Census Bureau has conducted the national survey every odd numbered year. In 1984, it was renamed the American Housing Survey. Beginning with the 2011 AHS, the survey instrument consisted of a permanent set of core questions, plus questions on topical supplements that will rotate in and out of future surveys. Starting in 2013, the AHS asked questions from the topical supplements of only half the sample to reduce respondent burden. In 2015, the AHS underwent a major redesign whereby a new national and metropolitan area longitudinal sample was selected for the first time since 1985.

Results from the 2019 AHS will be available in the following two formats:

- AHS Table Creator (a web application)
- Public Use File (PUF) (microdata)

Using the Table Creator tool, AHS summary tables can be customized using selected column variables and tenure and geography filters, and downloaded into Excel.

This document only notes changes in Table Creator column variables (box heads), tables, and table items (individual table rows/stubs) for the 2019 survey year. For historical changes prior to 2019, see http://www.census.gov/programs-surveys/ahs/tech-documentation/def-errors-changes.html. For information about changes to individual variables on the Public Use File, see the Codebook at https://www.census.gov/programs-surveys/ahs/tech-documentation/codebooks.html.

Rounding:

Beginning in 2015, all medians, except Year Structure Built, and means starting in 2019 have been rounded to four significant digits as part of the new disclosure avoidance protocol.

Dependency:

"Dependent interviewing" is the practice of using a respondent's answer to a question from a *prior* survey to "fill in" the response to the same question in the *current* survey, thereby improving accuracy and reducing respondent burden in the current survey. For changes in dependent interviewing between 2017 and 2019, see https://www.census.gov/programs-surveys/ahs/tech-documentation/help-guides/2015-later/Dependent_Interviewing18.html.

Modified Column Variables:

Year Structure Built. A new category was added with the most current year (2018 to 2019).

Units by Structure Type. Initial American Housing Survey (AHS) estimates in 2017 and 2019 showed a sharp increase in single attached units compared to 2015 and earlier, and a decrease in housing units in multi-unit structures having fewer than 20 apartments. Census determined that the large differences may have been due to questionnaire changes and respondents' difficulty distinguishing single attached units from multi-units. As a result, structure type responses were edited in the 2017 and 2019 data for units reporting as single attached but having characteristics of a multi-unit, and vice versa.

In 2017, these changes were made based either on a set of criteria (rule-based) using qualitative variables or on the output of a model that assigned structure type. In 2019, a logistic regression model was used. These edits brought the national estimates and most metro-level estimates of single attached units and of multi-units closer to American Community Survey (ACS) estimates. For more information, see https://www.census.gov/programs-surveys/ahs/tech-documentation/user-notes/2017_struct_type_est.html

Year Householder Moved Into Unit. A new category was added with the most current year (2016 to 2019).

Primary Year of Work. New categories were added with the most current years (2017, 2018, & 2019).

2013 Metropolitan Area. Prior to the 2019 AHS, the principal city status indicator used in the METRO_2013 variable and tables used different year delineations for some sample. Beginning in 2019, these were standardized so that all sample used the February 2013 principal city delineations defined by OMB available at https://www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html. Accordingly, the geography filters for 2013 Metropolitan Areas and 2013 Non-Metropolitan Areas were also affected.

New Tables:

The 2019 AHS included new topical supplements. As a result, four new tables were introduced:

Home Accessibility. This table provides indicators on mobility devices, home accessibility problems, and housing modifications made for accessibility purposes. Some of the table items previously appeared in the 2011 AHS. In 2019, new questions were added on planned accessibility improvements and how well accessibility needs were met. The chairlift question was also expanded to include stairlifts and platform lifts. Selected home accessibility problems and accessibility features in the home were dropped. The "Home Accessibility Reported" stub was renamed "Home Accessibility Problems," with many items dropped and several new items added. Only the "Getting to the bathroom" row remains, however in 2019, the question included additional wording "…because of a condition other than a temporary injury." Likewise, the "Accessibility Features in Home" stub was significantly redesigned, with only "Ramps" and "Elevators" remaining, but with a slight design change to yes/no/not reported responses. "Entry-level bedroom" and "Entry-level bathroom" items are no longer comparable due to the restriction of the data to units with two or more floors in 2019.

Food Security. This table measures access to sufficient quantity of affordable and nutritious food. All of the table items previously appeared in the 2015 AHS.

Post-Secondary Education. The AHS collected information on households with at least one member enrolled in school beyond the high school level as of the time of the interview, as well as households with at least one member who completed a post-secondary program since March 2019. Follow-up questions were asked about the type of program, whether the student attended full-time or part-time, whether the institution was public or private, and where the student lived while attending classes.

Deleted Tables:

All of the 2017 topical supplements were dropped from the 2019 AHS, but may return in subsequent surveys. As a result, the following tables are not options in the 2019 Table Creator menus:

Emergency and Disaster Preparedness

Delinquent Payments and Notices.

Evictions.

Commuting to Work by Mode of Transportation.

Annual Commuting Costs by Type of Commuter.

Table Changes: (listed by table title and universe)

Housing Unit Characteristics (All Housing Units)

Modified Items:

Units in Structure. See additional changes under the Units by Structure Type entry in the Modified Column Variables section above.

Year Structure Built. A new category was added to include the most current year (2018 to 2019).

Square Footage of Unit. A new mean row was added.

General Housing (Occupied Units)

Modified Items:

Units in Structure. See additional changes under the Units by Structure Type entry in the Modified Column Variables section above.

Year Structure Built. A new category was added to include the most current year (2018 to 2019).

Rooms, Size, and Amenities (Occupied Units)

Modified Items:

Square Footage of Unit. A new mean row was added.

Square Feet per Person. A new mean row was added.

Phone Service. In 2019, a new category, landline available, was added. Cell phone estimates rose in 2019 because the lead-in question used in 2017 was removed in 2019. The lead-in asked, "If we need to contact you by telephone to follow-up on missing data, is there a telephone in this home?" If they answered yes, then the AHS asked if they have a landline, followed by how many adults in the household have a cell phone. Twenty-three percent of cases answered no to the lead-in. Some of those may have answered no because they did not want to be called, not because they did not have a

phone. This may have made the land line and cell phone counts artificially lower in 2017 compared to 2019.

Housing Migration (Occupied Units)

Modified Items:

Reasons for Leaving Previous Residence. Footnote 5 was deleted because it referred to 2017 topical table on Evictions, which is not available in 2019.

Household Demographics (Occupied Units)

New Items:

Coupled Households. New rows were added for "households with married householder, spouse present" by type of married couple. See Other Household Characteristics under Modified Items.

The AHS has always allowed same-sex married couples to be reported during data collection, but same-sex married couples and same-sex parent pointers were edited out prior to the 2019 AHS in accordance with Current Population Survey (CPS) edits at the time.

The CPS edits used by the AHS in 2015 and 2017 mostly changed same-sex married couples to same-sex unmarried partners. Prior to 2015, even older CPS edits were used. For more information, see https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/SEHSD-WP-2018-30.pdf.

The Census Bureau began phasing in new relationship question categories in the CPS in May 2015. In addition to a change to response categories for the relationship question, edits for parent pointers also changed to allow gender neutral parent identifiers for children who live with same-sex parents. These relationships are used to define families, subfamilies, and unrelated individuals.

Since the AHS adopted the new CPS edits, the AHS also now allows couples of the same-sex to be included in estimates of married couples and married and unmarried couples can now be identified as same-sex parents as well.

Modified Items:

The same-sex couple edits, described above under New Items, are used to define families, subfamilies, and unrelated individuals. As a result, it has had a minor effect on estimates in the following stubs:
- *Household Composition by Age of Householder*
- *Households With Single Children Under 18 Years Old*

Race and Hispanic Origin. Categories were expanded to include new detail on Hispanic or Latino origin.

Age of Householder. A new mean row was added.

Enrollment Status of Householder. The question wording changed slightly between 2017 and 2019 from "last week" to "in March of this year." Two footnotes were also added to this stub to explain why figures may not be comparable with 2017 because 2017 was restricted to householders between the ages of 16 and 54, whereas 2019 is restricted to householders 16 years of age or older. In addition, 2019 figures do not add to total like they did in 2017 because the total was estimated using the full sample, whereas the other 2019 estimates shown in the table use only half of the sample.

Year Householder Immigrated to the United States. A category was modified to include the most current year (2016 to 2019).

Year Householder Moved Into Unit. A category was modified to include the most current year (2016 to 2019)

Other Household Characteristics. In 2017, this stub had data about unmarried partner couples. In 2019, it was moved to the Coupled Households stub, which includes a breakdown of "households with unmarried householder, partner present" by type of unmarried partner couple. See Coupled Households under New Items.

Income Characteristics (Occupied Units)

Modified Items:

Household Income. A new mean row was added.

Income of Families and Primary Individuals. A new mean row was added.

Housing Costs (Occupied Units)

Modified Items:

Monthly Total Housing Costs. A new mean row was added.

Monthly Total Housing Costs as Percent of Household Income. New mean rows were added.

Monthly Total Mortgage Amount. A new mean row was added.

Monthly Cost Paid for Rent. A new mean row was added.

Monthly Cost Paid for Real Estate Taxes. In 2019, the respondent had to be an owner to receive this question. A new mean row was also added. In addition, in 2017 this stub was rounded during recodes to protect confidentiality, but it affected the distribution after noise was added to the 2017 and later PUFs. In 2019, recode rounding was removed because noise was introduced to protect confidentiality.

Monthly Cost Paid for Homeowner or Renter Insurance. A new mean row was added.

Monthly Homeowner or Condominium Association Fee Amount. A new mean row was added.

Monthly Cost Paid for Lot/Land Rent. In 2017, the LOTAMT variable was set to $0 for some missing values and a smaller number of positive values. This was corrected in 2019, which caused an increase in not reported estimates and contributed to a slight increase in the median compared to 2017. Although LOTAMT is a component of the Monthly Total Housing Costs indicator (TOTHCAMT), the changes to LOTAMT did not significantly affect TOTHCAMT. In addition, a new mean row was added for Monthly Cost Paid for Lot/Land Rent.

Monthly Cost Paid for Utilities. A new mean row was added.

Monthly Cost Paid for Electricity. A new mean row was added.

Monthly Cost Paid for Gas. A new mean row was added.

Monthly Cost Paid for Fuel Oil. A new mean row was added. Footnote 3 was changed to footnote 4. This was corrected on 2015-2017 tables as well.

Monthly Cost Paid for Other Fuel. A new mean row was added.

Monthly Cost Paid for Trash Collection. A new mean row was added.

Monthly Cost Paid for Water. A new mean row was added.

Value, Purchase Price, and Source of Down Payment (Owner-Occupied Units)

In 2019, the respondent had to be an owner to receive this question. Most respondents in prior years were owners since this question applies to owner-occupied units. In 2019, however, there may have been some additional not reported values for those owner-occupied units where someone other than the owner was interviewed. The following table stubs were affected:

Major Source of Down Payment
Down Payment
First-Time Owners
Homes Currently for Sale or Rent
How Acquired
Lead Pipes
Purchase Price
Year Unit Acquired

Modified Item:

Value. A new mean row was added.

Ratio of Value to Household Income. A new mean row was added.

Year Unit Acquired. A new mean row was added. In addition, a category was modified to include the most current year (2016 to 2019).

Purchase Price. A new mean row was added.

Mortgage Characteristics (Owner-Occupied Units)

Modified Items:

Total Remaining Debt Across All Mortgages or Similar Debts. A new mean row was added.

Current Total Loan as Percent of Value. A new mean row was added.

Cash Received in Primary Mortgage Refinance. A new mean row was added.

Percent of Primary Mortgage Refinanced Cash Used for Home Additions, Improvements, or Repairs. A new mean row was added.

Total Home-Equity Line-of-Credit Limit. A new mean row was added.

Current Line-of-Credit Interest Rate. A new mean row was added. In addition, the universe is no longer restricted to owners with a current balance on one or more home-equity line-of-credit mortgages.

Line-of-Credit Amount Used for Home Additions, Improvements, or Repairs. A new mean row was added. In addition, the universe is no longer restricted to owners with a current balance on one or more home-equity line-of-credit mortgages.

Additional Mortgage Characteristics (Owner-Occupied Units)

Modified Items:

Year Mortgage Obtained. A new mean row was added. In addition, a category was modified to include the most current year (2016 to 2019).

Interest Rate of Mortgage. A new mean row was added.

Term of Mortgage. A new mean row was added.

Final Payment Due for Balloon Mortgage. A new mean row was added.

Percentage Used for Purchase of Home. A new mean row was added.

Total Outstanding Principal Amount. A new mean row was added.

Amount of Private Mortgage Insurance Included in Monthly Payment. A new mean row was added.

Amount of Other Charges Included in Monthly Payment. A new mean row was added.

Monthly Payment Change of Mortgage Over Last 12 Months. A new mean row was added.

Home Improvement Characteristics (Owner-Occupied Units)

New Items:

Financial Assistance With Disaster Repairs (Houston metro only). A new stub was added to measure financial assistance after Hurricane Harvey. Since Houston is the one metro area in the 2019 AHS sample that was primarily affected by Hurricane Harvey, this stub only appears when Houston is selected.

Modified Items:

Routine Maintenance Costs in Typical Year. A new mean row was added.

Gut Rehabilitation in the Last Ten Years. Subuniverse was updated to include only homes built before 2009, which helps keep the data consistent with the 2017 AHS by restricting it to units that have experienced a gut rehabilitation "in the last ten years" and are at least ten years old.

Home Improvement Costs (Owner-Occupied Units)

Modified Items:

Total Home Improvement Activity in Last Two Years. A new mean row was added.

Disaster Repairs. New mean rows were added.

Remodeling. New mean rows were added.

Exterior Additions and Replacements. New mean rows were added.

Interior Additions and Replacements. New mean rows were added.

Lot or Yard Additions and Replacements. New mean rows were added.

Rent Subsidies and Rental Property Management (Renter-Occupied Units)

Modified Items:

Rent Control or Stabilization. Footnote 1 was updated to drop an old 2017 metro area no longer in sample (San Jose) and include a new 2019 metro area that is rent controlled (Portland).

New Metro Areas:
(Metros in the 2019 AHS Sample, but not in 2017)
Cincinnati
Cleveland
Denver
Kansas City
Memphis
Milwaukee
New Orleans
Pittsburgh
Portland
Raleigh
Metros sampled in 2019 match Office of Management and Budget (OMB) February 2013 delineations. All of the above metros were last sampled in the 2015 AHS. For more on the definitions, see Metropolitan Area Histories and https://www.census.gov/geographies/reference-files/time-series/demo/metro-micro/delineation-files.html.

Deleted Metro Areas:
(2017 Metro Areas not in 2019 AHS Sample)
Minneapolis-St. Paul
Tampa-St. Petersburg
Baltimore
San Antonio
Las Vegas
San Jose
Oklahoma City
Richmond
Birmingham-Hoover
Rochester

New States:
(States in the 2019 AHS Sample, but not in 2017)
Colorado
Ohio

Deleted States Areas:
(2017 States not in 2019 AHS Sample)
Maryland
Virginia